

In the claims:

2           1.       In a packet-based multi-user radio communication system in which a data source  
3 originates multiple cast data, an improvement of apparatus for a radio access network (RAN)  
4 part of the radio communication system for selectably facilitating communication of the  
5 broadcast or multicast data to a first mobile user endpoint and at least a second mobile user  
6 endpoint, said apparatus comprising:

7                   an identifier positioned at the radio access network, said identifier for identifying  
8 when communication of the multiple cast data is to be effectuated upon a common channel,  
9 common to both the first mobile user endpoint and the at least the second mobile user endpoint;  
10 and

11                   a point to multi-point bearer implementer coupled to said identifier, said point to  
12 multi-point bearer implementer for implementing a multiple-cast of the multiple-cast data upon  
13 the common channel to the first and at least second mobile stations, respectively, when said  
14 identifier identifies that the communication of the multiple-cast data is to be effectuated upon the  
15 common channel.

1           2.       The apparatus of claim 1 wherein the radio access network defines at least a first  
2 cell forming a corresponding at least first coverage area within which communication with the  
3 first and at least second mobile user endpoints, when positioned therein, is effectuable, and  
4 wherein said identifier identifies at least when the first and at least second mobile user endpoints  
5 are likely to be within the at least the first cell.

1           3.     The apparatus of claim 2 wherein identifications made by said identifier identify  
2     when the first and at least second mobile user endpoints are both at least likely to be within the  
3     cell and to request the communication of the multiple-cast data thereto.

1           4.     The apparatus of claim 3 wherein the first and at least second mobile user  
2     endpoints each generate requests to request communication of the multiple-cast data thereto and  
3     wherein said identifier identifies when any of the first and at least second mobile user endpoints  
4     requests the communication of the multiple-cast data thereto.

1           5.     The apparatus of claim 4 wherein said identifier further comprises a counter for  
2     counting the requests generated by the first and at least second mobile user endpoints for  
3     communication of the multiple-cast data thereto and a comparator coupled to the counter to  
4     receive indications of a count of the requests counted thereat, said comparator for comparing the  
5     count with a threshold value.

1           6.     The apparatus of claim 5 wherein said identifier identifies that the communication  
2     of the multiple-cast data is to be effectuated upon the common channel when the count compared  
3     by the comparator is beyond the threshold value.

1           7.     The apparatus of claim 4 wherein the requests generated by the first and at least  
2     second mobile user endpoints comprise PDP (Packet Data Protocol) context activation requests.

1           8.       The apparatus of claim 7 wherein the PDP context activation requests generated  
2 by the first and at least second mobile user endpoints and identified by said identifier are routed  
3 to the data source at which the multiple-cast data is originated, the data source identified by an IP  
4 (Internet Protocol) Multicast address, and the multiple-cast data generated by the data source  
5 routed to the radio access network pursuant to an IP Multicast.

1           9.       The apparatus of claim 8 wherein said point to multi-point bearer implementer  
2 selectably broadcasts the multiple-cast data provided to the radio access network as the IP  
3 Multicast as a RANcast upon the common channel.

1           10.      The apparatus of claim 2 wherein the radio access network comprises a radio  
2 network controller (RNC) and wherein said identifier and said point to multi-point bearer  
3 implementer are embodied at the radio network controller.

1           11.      The apparatus of claim 10 wherein the requests generated by the first and at least  
2 second mobile user endpoints and identified by said identifier are generated pursuant to a  
3 signaling exchange with the radio network controller.

1           12.      The apparatus of claim 2 wherein the radio access network further comprises a  
2 first base transceiver station and at least a second base transceiver station, the first base  
3 transceiver station defining the first cell and the at least the second base transceiver station  
4 defining at least a second cell, and wherein identifications made by said identifier are made

5 separately for mobile user endpoints at separate ones of the first and at least second cells,  
6 respectively.

1 13. The apparatus of claim 12 wherein said point to multi-point bearer implementer  
2 implements the multiple cast upon the common channel selectably in the first cell and in the at  
3 least the second cell responsive to the indications made by said identifier separately at the  
4 separate ones of the first and at least second cells.

1 14. The apparatus of claim 1 wherein the multiple-cast data is selectably transmitted  
2 as separate unicasts to at least a selected one of the first mobile user endpoint and the at least the  
3 second mobile user endpoint and wherein the multiple-cast data is communicated pursuant to the  
4 separate unicasts when said identifier fails to identify that the communication of the multiple-  
5 cast data is to be effectuated upon the common channel.

1           15.    In a method for communicating in a packet-based multi-user radio communication  
2 system in which a data service originates multiple-cast data, an improvement of a method for  
3 selectably facilitating communication of the multiple-cast data to a first mobile user endpoint and  
4 at least a second mobile user endpoint, said method comprising:

5                   identifying when communication of the multiple-cast data is to be effectuated  
6 upon a common channel, the common channel common to both the first mobile user endpoint  
7 and the at least the second mobile user endpoint, and

8                   implementing a point to multi-point bearer for casting of the multiple-cast data  
9 upon the common channel to the first and at least second mobile stations, respectively, when  
10 identification is made during said operation of identifying that the communication of the  
11 multiple-cast data is to be effectuated upon the common channel.

1           16.    The method of claim 15 further comprising the initial operation, performed  
2 selectably by the first and at least second mobile user endpoints, of requesting delivery of the  
3 multiple-cast data.

1           17.    The method of claim 16 wherein said operation of identifying comprises counting  
2 the requests generated during said operation of requesting and identifying the communication of  
3 the multiple-cast data to be effectuated upon the common channel when the requests counted  
4 during said operation of counting exceed a selected threshold.

1           18.    The method of claim 15 wherein the radio access network defines at least a first  
2 cell forming a corresponding at least first coverage area, and wherein said operation of  
3 identifying identifies at least when the first and at least second mobile user endpoints are likely  
4 to be within the at least the first cell.

1           19.    In a method of communicating in a packet-based, multi-user radio communication  
2 system in which a data source communicates packet-formatted data by way of a radio access  
3 network with at least a first mobile user endpoint, an improvement of a method for selectably  
4 facilitating communication of the packet-formatted data pursuant to a multiple cast with each of  
5 the at least the first mobile user endpoint of a set of mobile user endpoints, said method  
6 comprising:

7                   identifying at the radio access network which mobile user endpoints form the set  
8 of mobile user endpoints with which the data source is to communicate the packet-formatted data  
9 pursuant to the multiple cast;

10                  sending the packet-formatted data as a unicast to each of the at least the first  
11 mobile user endpoints of the set of mobile user endpoints if the set is identified during said  
12 operation of identifying to include fewer than a selected number of mobile user endpoints; and  
13 alternately

14                  sending the packet-formatted data as a multiple cast upon a common channel if  
15 the set of mobile user endpoints identified during said operation of identifying includes at least  
16 the selected number of mobile user endpoints.

1           20.    In a packet-based, multi-user radio communication system in which a data source  
2 communicates packet-formatted data with at least a first mobile user endpoint by way of a radio  
3 access network, an improvement of an apparatus for selectably facilitating communication of the  
4 packet-formatted data pursuant to a multiple cast with each of the at least the first mobile user  
5 endpoint of a set of mobile user endpoints, said apparatus comprising:

6                   an identifier positioned at the radio access network, said identifier for identifying  
7 which mobile user endpoints form the set of mobile user endpoints with which the data source is  
8 to communicate the packet-formatted data pursuant to the multiple cast;

9                   a point to multi-point bearer caster coupled to the data source to receive the  
10 packet-formatted data to be communicated and coupled to said identifier to receive indications  
11 identified thereat at least of how many user endpoints form the set of mobile user endpoints, said  
12 point to multi-point bearer caster selectably operable to send the packet-formatted data as a  
13 RANcast to each of the at least the first mobile user endpoints.